

IN THE CLAIMS

Please delete all prior lists of claims in the application and insert the following list of claims:

1. ~~[Cancel] An isolated polypeptide comprising in amino to carboxy order P4-P3-P2-P1, wherein P4 is P, P3 is R or K, P2 is any amino acid, and P1 is K or R (SEQ. ID. NO: 1).~~
2. ~~[Cancel] The isolated polypeptide of claim 1, wherein P4 is amino-terminally blocked.~~
3. ~~[Cancel] The isolated polypeptide of claim 2, wherein P4 is acetylated.~~
4. [Currently Amended] ~~The isolated polypeptide of claim 2,~~ An isolated polypeptide comprising in amino to carboxy order P4-P3-P2-P1, wherein P4 is P, P3 is A or R or K, P2 is any amino acid, and P1 is K or R (SEQ. ID. NO: 1 and SEQ. ID. NO: 6), wherein P4 is amino-terminally blocked, and further comprising a fluorogenic leaving group that is covalently bound to P4-P3-P2-P1 at a carboxy-terminus of P4-P3-P2-P1.
5. [Original] The isolated polypeptide of claim 4, wherein the fluorogenic leaving group is bound via an amide bond.
6. [Original] The isolated polypeptide of claim 4, wherein the fluorogenic leaving group comprises 7-amino-4-carbamoylmethyl-coumarin.
7. [Currently Amended] The isolated polypeptide of claim ~~1~~ 4, wherein P2 is N and further comprising a fluorogenic leaving group that is bound to P4-P3-P2-P1 via an amide bond on a carboxy-terminus of P4-P3-P2-P1

8. [Original] The isolated polypeptide of claim 7, wherein the fluorogenic leaving group comprises 7-amino-4-carbamoylmethyl-coumarin.
9. [Original] The isolated polypeptide of claim 6, wherein P4-P3-P2-P1 is selected from the group consisting of P-R-N-K (SEQ. ID. NO: 2), P-K-N-K (SEQ. ID. NO: 3), P-R-N-R (SEQ. ID. NO: 4), P-K-N-R (SEQ. ID. NO: 5), P-A-N-K (SEQ. ID. NO: 6), and P-R-T-K (SEQ. ID. NO: 7).
10. [Original] The isolated polypeptide of claim 9, wherein P4-P3-P2-P1 is P-R-N-K (SEQ. ID. NO: 2).
11. [Original] The isolated polypeptide of claim 9, wherein P4-P3-P2-P1 is P-K-N-K (SEQ. ID. NO: 3).
12. [Original] The isolated polypeptide of claim 9, wherein P4-P3-P2-P1 is P-R-N-R (SEQ. ID. NO: 4).
13. [Original] The isolated polypeptide of claim 9, wherein P4-P3-P2-P1 is P-K-N-R (SEQ. ID. NO: 5).
14. [Original] The isolated polypeptide of claim 9, wherein P4-P3-P2-P1 is P-A-N-K (SEQ. ID. NO: 6).
15. [Original] The isolated polypeptide of claim 9, wherein P4-P3-P2-P1 is P-R-T-K (SEQ. ID. NO: 7).
16. ~~[Cancel] The isolated polypeptide of claim 1, wherein P1 is linked to a serine protease reactive inhibitor moiety.~~

17. ~~[Cancel] The isolated polypeptide of claim 16, wherein the serine protease reactive inhibitor moiety is chloromethyl ketone, which is linked to P1.~~
18. ~~[Cancel] The isolated polypeptide of claim 16, wherein P4 is amino-terminally blocked.~~
19. ~~[Cancel] The isolated polypeptide of claim 18, wherein P4 is acetylated.~~
20. ~~[Cancel] The isolated polypeptide of claim 18, wherein P2 is N.~~
21. ~~[Cancel] The isolated polypeptide of claim 20, wherein P4-P3-P2-P1 is selected from the group consisting of P-R-N-K (SEQ. ID. NO. 2), P-K-N-K (SEQ. ID. NO. 3), P-R-N-R (SEQ. ID. NO. 4), P-K-N-R (SEQ. ID. NO. 5), P-A-N-K (SEQ. ID. NO. 6), and P-R-T-K (SEQ. ID. NO. 7).~~
22. ~~[Cancel] The isolated polypeptide of claim 21, wherein P4-P3-P2-P1 is P-R-N-K (SEQ. ID. NO. 2).~~
23. ~~[Cancel] The isolated polypeptide of claim 21, wherein P4-P3-P2-P1 is P-K-N-K (SEQ. ID. NO. 3).~~
24. ~~[Cancel] The isolated polypeptide of claim 21, wherein P4-P3-P2-P1 is P-R-N-R (SEQ. ID. NO. 4).~~
25. ~~[Cancel] The isolated polypeptide of claim 21, wherein P4-P3-P2-P1 is P-K-N-R (SEQ. ID. NO. 5).~~
26. ~~[Cancel] The isolated polypeptide of claim 21, wherein P4-P3-P2-P1 is P-A-N-K (SEQ. ID. NO. 6).~~

27. ~~[Cancel] The isolated polypeptide of claim 21, wherein P4-P3-P2-P1 is P-R-T-K (SEQ. ID. NO. 7).~~
28. [Original] A method of assaying activity of an enzymatically-active β -tryptase in a sample, the method comprising:
- (a) contacting the sample with an isolated polypeptide comprising in amino to carboxy order P4-P3-P2-P1, wherein P4 is amino-terminally blocked and is P, and wherein P4-P3-P2-P1 is selected from the group consisting of P-R-N-K (SEQ. ID. NO: 2), P-K-N-K (SEQ. ID. NO: 3), P-R-N-R (SEQ. ID. NO: 4), P-K-N-R (SEQ. ID. NO: 5), P-A-N-K (SEQ. ID. NO: 6), and P-R-T-K (SEQ. ID. NO: 7), and further wherein a fluorogenic leaving group comprising 7-amino-4-carbamoylmethyl-coumarin is bound via an amide bond to P4-P3-P2-P1 at a carboxy-terminus of P4-P3-P2-P1, under conditions wherein an amount of the fluorogenic leaving group is cleaved from P4-P3-P2-P1 upon action of the β -tryptase, thereby producing a fluorescent moiety; and then
 - (b) quantifying the amount of detectable leaving group cleaved from the polypeptide, the amount being an indication of the activity of the enzymatically-active β -tryptase in the sample.
29. [Original] The method of claim 28, wherein in step (a), the detectable leaving group is a fluorogenic leaving group.
30. [Original] The method of claim 29, wherein in step (a), the fluorogenic leaving group is attached to a carboxy-terminus of P4-P3-P2-P1 via an amide bond.
31. [Original] The method of claim 29, wherein in step (a), P4 is acetylated.

32. [Original] The method of claim 31, wherein in step (b), the amount of detectable leaving group cleaved from the polypeptide is detected by observing whether the sample undergoes a detectable change in fluorescence.
33. [Original] The method of claim 28, wherein the sample is a bodily fluid clinical sample.
34. [Original] The method of claim 33, wherein the clinical sample is whole blood, serum, plasma, urine, tears, lavage, tissue extract, or conditioned media.
35. [Original] The method of claim 28, further comprising, prior to step (a), adding aprotinin to the sample to inhibit proteases other than β -tryptase, thereby reducing non-specific cleavage of the detectable leaving group from P4-P3-P2-P1 by proteases other than β -tryptase.
36. [Original] A method of assaying activity of an enzymatically-active β -tryptase in a sample, the method comprising:
- (a) contacting the sample with an isolated polypeptide comprising in amino to carboxy order P4-P3-P2-P1, wherein P4 is amino-terminally blocked, and wherein P4-P3-P2-P1 is selected from the group consisting of P-R-N-K (SEQ. ID. NO: 2), P-K-N-K (SEQ. ID. NO: 3), P-R-N-R (SEQ. ID. NO: 4), P-K-N-R (SEQ. ID. NO: 5), P-A-N-K (SEQ. ID. NO: 6), and P-R-T-K (SEQ. ID. NO: 7), and further wherein a fluorogenic leaving group comprising 7-amino-4-carbamoylmethyl- coumarin is bound via an amide bond to P4-P3-P2-P1 at a carboxy-terminus of P4-P3-P2-P1, under conditions wherein an amount of the fluorogenic leaving group is cleaved from P4-P3-P2-P1 upon action of the β -tryptase, thereby producing a fluorescent moiety; and then

- (b) measuring whether the sample undergoes a detectable change in fluorescence, the detectable change being an indication of the activity of the enzymatically-active β -tryptase in the sample.
37. [Original] The method of claim 34, further comprising adding aprotinin to the sample to inhibit proteases other than β -tryptase, thereby reducing non-specific cleavage of the fluorogenic leaving group from P4-P3-P2-P1 by proteases other than β -tryptase.
38. ~~[Cancel] A method of inhibiting an enzymatically-active β -tryptase in a sample, the method comprising: contacting the sample with an isolated polypeptide comprising in amino to carboxy order P4-P3-P2-P1, wherein P4 is P, P3 is R or K, P2 is any amino acid, and P1 is K or R (SEQ. ID. NO. 1), wherein P4 is acetylated, and wherein P1 is linked to a chloromethyl ketone, under conditions wherein the isolated polypeptide interacts with and inhibits enzymatic β -tryptase present in the sample.~~
39. ~~[Cancel] The method of claim 38, further comprising quantifying inhibition of the β -tryptase activity in the sample.~~
40. ~~[Cancel] The method of claim 38, wherein in step (a), P4-P3-P2-P1 is selected from the group consisting of P-R-N-K (SEQ. ID. NO. 2), P-K-N-K (SEQ. ID. NO. 3), P-R-N-R (SEQ. ID. NO. 4), P-K-N-R (SEQ. ID. NO. 5), P-A-N-K (SEQ. ID. NO. 6), and P-R-T-K (SEQ. ID. NO. 7).~~
41. [Currently Amended] A kit for analyzing samples for β -tryptase activity comprising:
an isolated polypeptide comprising in amino to carboxy order P4-P3-P2-P1, wherein P4 is P, P3 is A or R or K, P2 is any amino acid, and P1 is K or

R (SEQ. ID. NO: 1 and SEQ. ID. NO: 6), and wherein a one and only one detectable leaving group is covalently bound to P4-P3-P2-P1; and
a suitable container, the isolated polypeptide being disposed therein.

42. [Original] The kit of claim 41, wherein the isolated polypeptide is provided in solution, lyophilized, or bound to a solid support.
43. [Cancel] ~~The kit of claim 41, wherein P4-P3-P2-P1 further comprises a serine protease reactive moiety.~~
44. [Original] The kit of claim 41, wherein P4 of the isolated polypeptide is acetylated.
45. [Original] The kit of claim 41, wherein the detectable leaving group is a fluorogenic leaving group covalently bonded to a carboxy-terminus of P4-P3-P2-P1 via an amide bond.
46. [Original] The kit of claim 41, wherein P4-P3-P2-P1 is selected from the group consisting of P-R-N-K (SEQ. ID. NO: 2), P-K-N-K (SEQ. ID. NO: 3), P-R-N-R (SEQ. ID. NO: 4), P-K-N-R (SEQ. ID. NO: 5), P-A-N-K (SEQ. ID. NO: 6), and P-R-T-K (SEQ. ID. NO: 7).
47. [Original] The kit of claim 41, further comprising a supply of aprotinin disposed in a second container.
48. [Cancel] ~~The kit of claim 41, wherein p1 is linked to a chloromethyl ketone.~~